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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/057,292	01/25/2002	Alfred Trzmiel	P6588.3US	1990

30008 7590 12/15/2004  
GUDRUN E. HUCKETT DRAUDT  
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WUPPERTAL, 42289  
GERMANY

EXAMINER
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KEASEL, ERIC S

ART UNIT	PAPER NUMBER
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3754

DATE MAILED: 12/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/057,292

Applicant(s)

TRZMIEL ET AL.

Examiner

Eric Keasel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3,5 and 7-51 is/are pending in the application.
- 4a) Of the above claim(s) 2,3 and 10-47 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,5,7-9 and 48-51 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on Sep 20, 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Election/Restrictions*

1. Claims 2, 3, and 10-47 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Groups and/or Species, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 9.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Inagaki et al. (US Patent Number 4,762,300).

Inagaki et al. disclose a control device for hydraulic, mechanical, and hydraulic-mechanical components comprising a housing; at least one drive element arranged in the housing; wherein the at least one drive element is a piezo element (14) having a voltage-dependent stroke-force behavior; further comprising a piston (18) arranged in the housing, wherein the piezo element (14) indirectly controls the piston (18); further comprising at least one pressure spring (282) arranged in the housing, wherein the piezo element (14) engages the piston (18) with interposition of the at least one pressure spring (282); wherein two of the piezo elements (14) are provided (see the embodiment of Fig. 6), wherein the two piezo elements (12) act indirectly on opposed ends of the piston (read as the top piston in Fig. 6, the lower PE element acts indirectly to the right portion of the piston through the passageway connecting the

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lower valve to the upper valve); wherein the piezo element (12) is a part of a directional control valve; wherein the directional control valve is directly controlled or pilot-operated; the lower spring (19) rests against the piston member; and wherein the PE element rests against a cover (12) of the housing.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1, 5, 7-9, and 48-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coleman (US Patent Number 4,866,091) in view of Weber (US Patent Number 5,911,245).

Coleman discloses a control device for hydraulic, mechanical, and hydraulic-mechanical components comprising a housing (see the embodiment of Figs. 4 and 5); at least one drive element (98, 114) arranged in the housing; further comprising a piston (92) arranged in the

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housing, wherein the drive element (98, 114) indirectly controls the piston (92); further comprising at least one pressure spring (100, 116) arranged in the housing, wherein the drive element (98, 114) engages the piston (92) with interposition of the at least one pressure spring (100, 116); wherein two of the drive elements (98, 114) are provided, wherein the two drive elements (98, 114) act indirectly on opposed ends of the piston (92); wherein the piston (92) is configured to be centered by a spring force in a center position when the two drive elements (98, 114) are not excited (see Fig. 4); wherein the drive element (98, 114) is a part of a directional control valve; wherein the directional control valve is directly controlled or pilot-operated; and the springs (100, 116) each against piston members (102, 118).

Coleman discloses the drive actuator as two solenoids on either side of the spool piston member rather than PE elements. Weber discloses that when the dynamic forces on the piston spool are generally equal and cancel each other out (as in the case of Coleman, Figs. 4 and 5), that PE device is an equivalent actuator to a solenoid actuator. At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to have replace the solenoids of Coleman with PE devices because one of ordinary skill in the art would have expected applicant's invention to perform equally well with PE devices or solenoids because Weber discloses that they are equivalent actuators, when the dynamic forces on the piston spool are generally equal and cancel each other out. Therefore, it would have been an obvious matter of design choice to modify Coleman to obtain the invention as specified in claims 1, 5, 7-9, and 48-51.

*Response to Arguments*

6. Applicant's arguments filed August 12, 2004 have been fully considered but they are not persuasive.

Re claim 1, applicant argues that Inagaki et al. disclose that the spring acts indirectly on the piston. The examiner agrees. However, there is no recited limitation in claim 1 that requires direct action; so claim 1 is still anticipated by Inagaki et al.

Re Coleman in view of Weber, applicant argues that, during the prosecution of Coleman, the patent office considered the use of DC solenoids instead of AC solenoids a sufficient feature for allowing an application. This argument has no basis. Without even pulling the file to read the prosecution history, the examiner notes that it is apparent this is not the case because the limitation DC solenoid does not appear in the claims.

Applicant argues that the springs of Coleman don't act directly on the piston so the speed of the actuator differs from the speed of the piston. The examiner agrees. This is exactly how applicant's elected embodiment (Fig. 2) works. In the elected embodiment, the actuator does not directly contact the piston so the speed of the actuator differs from the speed of the piston.

*Conclusion*

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after


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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Keasel whose telephone number is (571) 272-4929. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Mar can be reached on (571) 272-4906. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

 10 DEC 2004  
Eric Keasel  
Primary Examiner  
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